

Dix (J. H.)

DACRYOCYSTITIS.



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ART. I. — *A Hitherto Unobserved Result of Dacryocystitis.* By JOHN H. DIX, M. D., Boston, Massachusetts.

I would call the attention of the Society* to a result of dacryocystitis or inflammation of the lacrymal sac, which is certainly not spoken of by the leading writers upon ophthalmic surgery, and I believe not heretofore described or recognised.

In the early periods of affections of the excretory lacrymal apparatus, characterised by an overflow of tear, or of tear mixed with mucus, and at later periods when there is also occasional tenderness to pressure and slight inflammatory enlargement of the sac easily brought to resolution, and still later, when violent acute inflammation of the sac threatening to result in fistula lacrymalis exists, the patient not unfrequently enquires of the surgeon, whether the disease, if left to itself, would result in anything more than an increase of the same sort of annoyance with which he was then suffering.

To this it has been my habit, in accordance with that of writers,†

* Read before the Suffolk District Medical Society, June 1854.

† Travers. Synopsis of Diseases of the Eye, p. 371.

Mackensie. Diseases of the Eye, p. 175.

Lawrence (Hays) On Diseases of the Eye, p. 750.

Middlemore. Diseases of the Eye, vol. ii. p. 678.

Tyrell. Diseases of the Eye, vol. i. p. 514.

Jones' Ophthalmic Medicine and Surgery, (Hays,) p. 436.

Desmarres. Maladies des Yeux, pp. 142, 874.

Petit. Traité des Maladies Chirurgicales, T. i. p. 339.

Stæber. Maladies des Yeux, p. 29.

Rognetta. Traité d'Ophthalmologie, p. 714.

Rosas. Handbuch der Augenheilkunde, B. ii. p. 373.

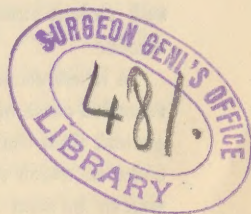
Zungken. Die Lebre von den Augenkrankheiten, p. 295.

Ruete. Lehrbuch der Ophthalmologie, p. 349.

Fischer. Klinischer Unterricht der Augenheilkunde, p. 330.

Himly. Krankheiten und Missbildungen der Menschlichen Auges. B. i. p. 321.

Benedict. Augenheilkunde, p. 135.



and practitioners generally to reply, that although any affection of the lacrymal passages, long continued, somewhat increases the liability to other inflammatory diseases of the globe, which might possibly result in a permanent lesion, yet he is not at any time, even in the last stage of acute suppurative inflammation of the sac, in peril of loss or injury of vision from this source alone.

If, however, I am correct in the diagnosis of the cases which follow, it is apparent that this opinion as to the absolute security of an eye, the lacrymal passages of which are subject to inflammation, is incorrect; that suppuration of the lacrymal sac may be the direct and speedy cause of destruction of vision, and possibly of life.

Ordinarily, from acute inflammation, unless it admits of resolution, or unless there is some surgical intervention, the sac opens anteriorly and its contents are discharged through the integuments under the tendon of the orbicularis muscle, and temporarily or permanently a fistula lacrymalis is formed. Sometimes, but unfortunately very rarely, the obstruction below may give way; the discharge taking place through the nasal duct into the nostril, and the disease be for the time or forever removed. Thirdly. The sac may be ruptured laterally, and the pus making its way into the cellular tissue between the sac, the globe, and the conjunctiva, escapes through one or more fistulous openings in the conjunctiva. Of this, I have never seen an example, but it is mentioned by Chelius.†

To a fourth, and as I believe hitherto unobserved result, I especially desire your attention.

The sac may burst posteriorly, its purulent contents be infiltrated into the orbital cellular tissue; the eyeball everted towards the outer canthus and protruded from the orbit; vision destroyed by the sudden and violent extension of the optic nerve, and cerebral inflammation induced.

In illustration, I present to you the two following as the only yet recorded cases of the kind, and as inexplicable upon any other probable ground than that which I have assumed. I shall relate them in the order in which they fell under my observation; because, in the first was to be seen the result of an event which had long before taken place, giving me a strong but not an entire conviction of the original cause, until the second took place, under my own care. By following

† *Augenheilkunde*, B. i, p. 262.

the same steps, you can better judge of the correctness of my conclusion.

Feb. 24th, 1853. Mrs. N. S. æt. 25, of Woburn, three years ago, began to be troubled occasionally with an overflow of tear, from the right eye, after exposure to wind or fire, or close application, and at the same time or very soon afterwards, with an occasional deposite of matter at the inner canthus.

About two years ago, a swelling commenced in the lids. She believes, but does not positively remember, that previous to this swelling of the lids, there was a dull pain at the inner corner of the eye, but thinks that there was at first no sensible swelling at this place. This swelled, reddened, and slightly painful condition of the lids had continued about twenty-four hours, when suddenly just after she had retired to bed, an intense pain commenced deep in or behind the globe of the eye.

The intensity of the pain increased, and in the morning the lids were excessively swollen and turned out, and the globe of the eye protruded very far from the orbit. Leeches were applied at the inner corner of the eye, and also upon the temples, and on the third day after this, the swollen everted conjunctiva of the lower lid was opened by Dr. Culten, who visited her in consultation with Dr. Drew, of Woburn. Immediately after the incision, although, as I am informed by Dr. Drew, there was but little, if any purulent discharge from the opening, the violent pain was mitigated. Two days after, an abscess formed and opened in the lid above the tendon of the orbicularis muscle. From this time, the globe gradually receded and the swollen lids began to contract. In a few days, she found that the vision of this eye was wholly lost.

She believes that in about six months the eye ball receded to its present position. Now, the globe is not at all projected, but is considerably everted. There is no vision, and total insensibility to light.

Injecting the sac through the lower horizontal canal, the water returns through the upper one. Pressing upon the punctum of the upper lid and injecting through the lower one, the sac does not become sensibly distended, but a decided pain is caused. There is of late some increase in the discharge from the corner, both of tears and of mucus. I advised and inserted a style.

March 2nd, 1854. After the introduction of the style, various means, as repeated vesications, strychnia, &c. &c., were adopted and

persevered in, with the hope of exciting the retina and optic nerve, but without any success. The style is retained in the duct, there being still some, though much less overflow of tear, than formerly, and the secretion of mucus very much diminished. There has been no renewal of inflammation.

The only circumstance in this case creating a doubt as to the cause of the projection and amaurotic blindness, was the uncertainty of the patient whether the symptoms of inflammation in the lids and globe were preceded by any such symptoms in the lacrymal sac. But in the first place, the extreme pain very soon after endured, may have caused the remembrance of her first suffering to be comparatively indistinct, and in the second place it does sometimes, though very seldom, happen that in actual inflammation of the sac, the erysipelatous-looking inflammation in the lids is the first symptom that compels serious attention.

The fact that the superficial discharge did not take place where the opening of the sac ordinarily does, I conceive to be not at all incompatible with the supposed course of events, for a discharge of pus having taken place from the sac into the orbit, would find above, a readier exit than below the tendon, where the anterior wall of the sac and the integuments, offer a greater resistance than the integuments alone.

Aside from these considerations, however, you will find in the prominent features of the above case, the catarrhal inflammation of the lacrymal passages preceding and following the sudden and violent increase of pain, and the projection and eversion of the globe, a convincing analogy to the following.

February 3rd, 1854. Mrs. C., of Boston, æt. 26, a year ago had a sudden swelling at the inner corner of the right eye, accompanied by severe pain. In about twelve hours, however, both swelling and pain subsided.

Ever since, there has been, from exposure to wind out of doors, and also occasionally when not exposed, an overflow of tear from that eye; the discharge of tear during the present winter having been accompanied by yellowish matter.

Yesterday, swelling and pain in the same region, commenced.—The sac apparently was not much enlarged, but severe pain was referred to its location, and the lids closed from the erysipelatous-looking fullness which accompanies suppuration of the sac. A small poultice

at the canthus and opiate vapour for inhalation through the right nostril were directed.

February 4th. The pain less severe, continues as before.

February 5th. The pain much increased, and extending back into the head and into the whole globe of the eye. The swelling of the lids also at first seems greater, but by raising the edge just enough to see the cornea, it is evident that the globe projected from the orbit. There was also chemosis of the conjunctiva over the lower side of the cornea, and a divergent strabismus of the globe.

I made, with an ordinary lancet, a free opening into the sac, from which flowed not more than three or four drops of pus. Three leeches were directed to the right temple, and were followed by some relief of the pain.

February 6th. The projection of the globe still increases, so that between the swollen and slightly everted lids, the lower side of the cornea and much of the chemosed conjunctiva below it were visible. The pain was intolerable, and some indication of cerebral disturbance. In the mean time there had been no discharge from the large opening which I made into the sac the morning before.

On the evening of the same day I saw her again, with the intention of opening very deeply and extensively into the orbit for the evacuation of pus, which I presumed it to contain. With this view, Dr. John Head, of the U. S. A., did me the favor to accompany me. Three hours before we arrived, Mrs. C. had been suddenly relieved of the pain by a copious gush, into the right nostril, of matter of an excessively offensive odour.

The pain steadily abated, the projection and distortion of the globe diminished, and the following day I could raise the upper lid sufficiently to determine that the vision of the eye was safe, although on account of its mal-position she saw with both eyes, double.

Mrs. C. was seen during this time by Dr. Channing, under whose care she was recovering from a recent parturition, and also by Dr. C. D. Homans, and Messrs. Morong and Laincolu. In about ten days, the projection of the globe which, on the day after the evacuation through the nostril, I found by measurement to be one-third of an inch, had quite receded, and with it the external strabismus and double vision and the conjunctival chemosis passed away.

Mrs. C., not being out of doors for several weeks, found somewhat less inconvenience from the overflow of the tear and mucus than for a

short time before the acute attack ; but on March 14th, five weeks after this last attack, I was again called, and found her suffering, but not severely, with pain at the canthus of the same eye, the sac being very little enlarged, but excessively tender on pressure.

At the conclusion of my first attendance, I explained to her what I expected had taken place, and that to prevent the recurrence of the same or worse results, it would be expedient at the first threatening of inflammation at the inner canthus to open the sac freely, and obliterate it or insert a style.

The patient being etherised, a style was inserted with immediate relief of the pain, and in a few days, entire subsidence of the swelling.

I did not urge upon her the insertion of the style at an earlier period, because complete recovery from the complaint sometimes follows a spontaneous evacuation downwards of the sac, through the duct, and also because she feared that an operation might affect the infant she was nursing. The appearance of this eye is now perfectly natural, and vision as good as ever.

That from the same cause, the ulterior effect upon vision was so different is very clearly accounted for by the duration of the cause in the two cases.

In the first case, from the earliest projection of the globe to its relief by the evacuation of pus from the orbit, there elapsed five days ; in the second, thirty-six hours. Probably, also, from the permanent eversion of the eye, in the first case, it was further projected than the eye of the second.

I have assumed, as most in accordance with the symptoms, that in these cases, the first occasion of the projection and eversion of the globe was the effusion from the sac, of pus, and its infiltration into the loose cellular tissue of the orbit ; not overlooking the possibility, that without any such effusion, inflammation of the cellular tissue might arise from mere contiguity to the inflamed sac. Whether, however, it was from one or the other, or both of these conditions combined, is not material to the important conclusion which I conceive to be plainly established by these cases, viz : that simple acute inflammation of the lacrymal sac may result ultimately in suppurative inflammation within the orbit, destruction of vision and death.

With regard to the treatment in such cases, aside from the ordinary antiphlogistic measures tending to lessen the amount of inflammation ;

and the inhalation of warm vapours through the nostril, by which, I am confident from frequent experience that the chance of a downward exit of the pus through the duct is augmented, relief can be expected only from a free opening into the orbit. This opening should be very large, and deep enough to pass quite through the posterior wall of the lacrymal sac, and if a catarrhal, or as some writers choose to call it, blenorrhœal condition of the lacrymal passages has pre-existed, a style or other means of permanent opening of the duct should be resorted to, before the external opening has closed.

Moreover, I believe that in all acute inflammations of the sac, as soon as there is reason to think that pus has begun to accumulate and before it has pointed, the sac should be opened in anticipation not only of this very serious result, but of other annoying consequences, such as an excessively large or irregular opening through the integuments, or the loss of a portion of the skin by sloughing. §

That this result of dacryocystitis has no place in elaborate treatises, professing an encyclopædic discussion of diseases of the eye, nor in the periodical records of surgery, would be very surprising, but for two considerations.

At present, ophthalmic as well as other medical literature is chiefly of European|| origin, and it may be presumed that in the variable climate of our eastern seaboard, where, probably, catarrhal diseases prevail more than anywhere else, and catarrh of the lacrymal passages is certainly very frequent, exceptional cases are more likely to be met with.

And if, in a case of this sort, the projection of the globe has taken place before the examination of the surgeon, I conceive that the diagnosis could hardly be other than suppurative inflammation of the cellular tissue of the orbit, unless accident or previous knowledge of the patient pointed to the condition of the lacrymal passages.

§ For these last reasons, Doctor Middlemore advises a very early opening. Vol. ii, p. 699.

|| I do not ignore the very valuable contributions of American writers—Hays, Wallace and others—but speak of the mass of our literature.

